CONTENTS

Part 1. Stability of Thin Films and Disperse Systems

1. A theory of interaction of particles in presence of electric double layers and the stability of lyophobe colloids and disperse systems. *Acta phys.-chim.*, 1939, Vol. 10, No. 3, pp. 333-346 1

2. On the repulsive forces between charged colloid particles and on the theory of slow coagulation and stability of lyophobe sols. *Trans. Faraday Soc.*, 1940, Vol. 36, No. 225, pp. 203-215 15
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

3. Addendum to paper by author, pp. 203-215. *Trans. Faraday Soc.*, 1940, Vol. 36, No. 231, pp. 730-731 28
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

4. Theory of the stability of strongly charged lyophobic sols and of the adhesion of strongly charged particles in solutions of electrolytes. *Acta phys.-chim.*, 1941, Vol. 14, No. 6, pp. 633-662 (with L. D. Landau) 30

5. A theory of the heterocoagulation, interaction and adhesion of dissimilar particles in solutions of electrolytes. *Discuss. Faraday Soc.*, 1954, No. 18, pp. 85-98 60
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

6. Static and kinetic stability of free films and froths. *Proceedings of the Second International Congress on Surface Activity*, Vol. 1. Gas-liquid and liquid-liquid interface. London, Butterworths, 1957, pp. 211-219 (with A. S. Titijevskaya) 74
Permission by Butterworths to publish this paper is gratefully acknowledged.

7. Surface forces and the stability of colloids and disperse systems. *J. Colloid Sci.*, 1964, Vol. 19, pp. 113-135 (with T. N. Voropayeva) 83
Permission by Academic Press © to publish this paper is gratefully acknowledged.

8. On the influence of the electromagnetic retardation of the molecular attraction on the coagulating concentrations of electrolytes. *DAN SSSR*, 1968, Vol. 153, No. 2, pp. 377-378 (with V. P. Smilga) 106

9. Main factors affecting the stability of colloids. *Pure & Appl. Chem.*, 1976, Vol. 48, pp. 387-392 109
Permission by Blackwell Scientific Publications Ltd. to publish this paper is gratefully acknowledged.

10. Some new aspects of and conclusions on theory of stability of colloids and their experimental verification. *Faraday Discussions of the Chemical Society,* Colloid Stability, 1978, No. 65, pp. 306-312 115
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

11. On the role of the electrostatic factor in stabilization of dispersions protected by adsorption layers of polymers. *J. Colloid & Interface Sci.,* 1987, Vol. 115, No. 1, pp. 234-239 (with S. S. Dukhin and A. E. Yaroshchuk) 122
Permission by Academic Press © to publish this paper is gratefully acknowledged.

Part 2. Kinetics of Thin Films

12. On the thickness of a layer of liquid remaining on the walls of vessels after their emptying, and the theory of the application of photoemulsion after coating on the cine film. *C.R. Acad. Sci. URSS,* 1943, Vol. 39, No. 1, pp. 13-16 129

13. On the thickness of the liquid film adhering to the walls of a vessel after emptying. *Acta phys. chim.,* 1945, Vol. 20, No. 3, pp. 349-352 134

14. Kinetic phenomena in the boundary layers of liquids. 1. The capillary osmosis. *Kolloid. Zh.,* 1947, Vol. 9, No. 5, pp. 335-347 (with G. P. Sidorenkov, E. A. Zubashchenko and E. V. Kiseleva) 138

15. Diffusiophoresis in electrolyte solutions and its role in the mechanism of the formation of films from caoutchouc latexes by the ionic deposition method. *Kolloidn Zh.,* 1961, Vol. 23, No. 1, pp. 40-52 (with S. S. Dukhin and A. A. Korotkova) 153

16. Molecular-surface forces in binary solutions. *Discuss. Faraday Soc.,* 1965, Vol. 40, pp. 246-252 (with I. E. Dzyaloshinsky, M. M. Koptelova and L. P. Pitayevsky) 159
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

17. Effect of surface forces on the properties of boundary and thin layers of liquids and disperse systems. *J. Pure & Appl. Chem.,* Butterworths, London, 1965, Vol. 10, pp. 375-394 166
Permission by Butterworths to publish this paper is gratefully acknowledged.

18. Thermoosmotic flow in wetting films of water on capillary surfaces. *Research in Surface Forces,* 1975, Vol. 4, pp. 171-175 (with A. P. Ershov and N. V. Churaev). Consult. Bur. N.Y. 186
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

19. Capillary osmosis theory and experimental study by a radioactive tracer method. *Ibid.,* pp. 182-193 (with M. M. Koptelova) 191

20. Boundary viscosity of polydimethylsiloxane oligomers. *Ibid.,* pp. 227-231 (with V. V. Karasev, I. A. Lavygin, I. I. Skorokhodov and E. N. Khromova) 203

21. The theory of frost heaving. *J. Colloid & Interface Sci.,* 1978, Vol. 67, No. 3, pp. 391-396 (with N. V. Churaev) 208
Permission by Academic Press © to publish this paper is gratefully acknowledged.

22. Flow of nonfreezing water interlayers and frost damage in porous solids. *Kolloidn Zh.,* 1980, Vol. 42, No. 5, pp. 842-852 (with N. V. Churaev) 214

23. Thermocrystallization flow of nonfreezing water films on the surface of capillaries. *J. Colloid & Interface Sci.,* 1981, Vol. 84, No. 1, pp. 182-190 (with N. V. Churaev, V. D. Sobolev and S. S. Barer) 223
Permission by Academic Press © to publish this paper is gratefully acknowledged.

24. Flow of nonfreezing water interlayers and frost heaving. *Cold Regions Science and Technology,* 1986, Vol. 12, pp. 57-66 (with N. V. Churaev) 232
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

Part 3. Flotation

25. Theory of flotation of small and medium-size particles. *Bull. Inst. Min. Met.,* 1961, No. 651, *Transactions,* 1960-61, Vol. 70, Part 5, pp. 221-246 (with S. S. Dukhin) 241
Permission by The Institution of Mining and Metallurgy to publish this paper is gratefully acknowledged.

26. Dependence of the floatability of antimonite on the value of zeta-potential. *Bull. Inst. Min. Met.,* 1961, No. 656, *Transactions,* 1960-61, Vol. 70, Part 10, pp. 569-574 (with N. D. Shukakidse) 267
Permission by The Institution of Mining and Metallurgy to publish this paper is gratefully acknowledged.

Part 4. Dynamics of Aerosols

27. On the cause of the non-coalescence of liquid drops upon contact. *C.R. Acad. Sci. URSS,* 1946, Vol. 54, No. 6, pp. 507-510 (with P. Prokhorov) 273

28. Diffusional phoresis of aerosol particles. *Research in Surface Forces,* 1963, pp. 162-166 (with S. P. Bakanov, S. S. Dukhin and G. A. Batova). Consult. Bur. N.Y. 277
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

29. The behavior of small aerosol particles in a nonuniformly heated gaseous mixture. *Research in Surface Forces,* 1963, pp. 167-173 (with S. P. Bakanov). Consult. Bur. N.Y. 281
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

30. A new method for obtaining constant and uniform supersaturations. *Ibid.,* pp. 179-181 (with P. S. Prokhorov, M. V. Velichko and L. F. Leonov) 287

31. Complete specular reflection of molecules at low angles of incidence and its effect on the molecular flow of gases through very narrow capillaries. *Research in Surface Forces,* 1966, Vol. 2, pp. 220-231 (with N. N. Fedyakin). Consult. Bur. N.Y. 290
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

32. Theory of thermophoresis of volatile aerosol particles and droplets of solutions. *J. Colloid & Interface Sci.,* 1971, Vol. 37, No. 4, pp. 793-800 (with Y. I. Yalamov and V. S. Galoian) 302
Permission by Academic Press © to publish this paper is gratefully acknowledged.

33. Study of passivation of condensation growth of drops of water and salt solutions. *J. Colloid & Interface Sci.,* 1971, Vol. 37, No. 2, pp. 484-494 (with Iu. S. Kurghin, L. A. Rosenzweig and V. A. Fedoseyev) 310
Permission by Academic Press © to publish this paper is gratefully acknowledged.

34. Measurement of the coefficient of thermal slip of gases and the thermophoreses velocity of large-size aerosol particles. *J. Colloid & Interface Sci.,* 1976, Vol. 57, No. 3, pp. 451-461 (with Ya. I. Rabinovich, A. I. Storozhilova and G. I. Shcherbina) 321
Permission by Academic Press © to publish this paper is gratefully acknowledged.

35. On thermal gas slip. *J. Colloid & Interface Sci.,* 1977, Vol. 60, No. 1, pp. 172-176 (with S. P. Bakanov and V. I. Roldughin) 332
Permission by Academic Press © to publish this paper is gratefully acknowledged.

36. Influence of surfactant vapor on the spectrum of cloud drops forming in the process of condensation growth. *Langmuir,* 1985, Vol. 1, No. 3, pp. 278-281 (with Yu. S. Kurghin, S. P. Bakanov and K. M. Merzhanov) 337

37. Influence of contact electrification on the collision of elastic particles with a rigid surface. *J. Colloid & Interface Sci.,* 1987, Vol. 118, No. 2, pp. 553-563 (with V. M. Muller, N. S. Mikhovich and Yu. P. Toporov) 341
Permission by Academic Press © to publish this paper is gratefully acknowledged.

38. Photophoresis of small-size particles in a gas excited by resonance radiation. *J. Colloid & Interface Sci.,* 1988, Vol. 122, No. 2, pp. 537-543 (with V. I. Roldughin) 352
Permission by Academic Press © to publish this paper is gratefully acknowledged.